

**Northwest
Hydro-Fracturing**

Increasing Water Well Yield

March 26, 2007

John Sharkey
Idaho Department of Water Resources
PO Box 83720
Boise, Idaho 83720

Dear Mr. Sharkey:

This letter is in reference to 37.03.09 Well Construction Standards Rules March 2 draft. I would like to make the following recommendations:

Line 316. #55 Well Development. Add the word **hydro-fracturing** after pumping.

Line 459. Letter i. Take out the words **stable units**. This is a judgement call on the part of the driller at the time of installation. When the PVC is installed and it goes to the bottom, the formation has been proven to be stable. What happens after that, the professional does not have to guarantee.

Line 460. Take out the words, **only with uninterrupted stable units**. We need interruption to give an avenue for water to come into these formations. Water does not flow through tombstone rock. It needs an avenue, which may be unstable.

Line 522. #050 Standards for Annular Sealing (Rule 50). Add **For Mud Rotary Drilling**.

Line 522-621. #050 Standards for Annular Sealing. This applies to mud rotary sealing processes. There are many times when a mud rotary cannot get to the target depth because of the loss of mud out into the formation. When the formations are like petrified cantaloupe they drink mud like water down a manhole. Then when you hit a 6-foot boulder, there will be alignment issues also. These are a couple of the reasons mud rotary rigs are limited in use in North Idaho. Therefore we need regulations that apply to drill and drive of cable tool and air rotary techniques.

Line ??. Add, **A shoe seal is adequate when placed in the aquatard unless proven to leak**. When the shoe seal or casing is leaking, fix it according to line #1273-1276. This goes for old or new construction. For drill and drive, let's stay with the sealing

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regulations that are law now. So much of the red print in this draft is doing exactly what the "Nebraska Study" is saying doesn't work. We've been warned, lets use caution.

Line 540 Letter b & c. This makes sense for mud rotary and geothermal drilling, but not for water drilling. Here again, we need separate sealing standards for mud rotary, geothermal and for drill and drive. The word ENSURE can be construed as a guarantee. Therefore it is not acceptable in this setting. This industry is an art as well as science. Industry is not here to guarantee everything, be it the earthquake or the tipped over tanker.

Line 564. Letter e. Remove the whole statement of letter E. We want to be able to perforate the casing at any point when it is necessary.

Line 595. Letter a. Remove the words, **solid, non-weathered, non-fractured zone**. If you have one crack you therefore don't have solid. If you have solid, non-weathered, non-fractured, you have no water. This creates a problem. The customer is looking for water. This line should read, **install unperforated well casing from the land surface to the consolidated formation.....**

Line 599. Letter b. Remove the words, **from the solid, non-weathered, non-fractured zone of the**. If you have one crack you therefore don't have solid. If you have solid, non-weathered, non-fractured, you have no water. This creates a problem. The customer is looking for water. This line should read: **Install a continuous annular seal from consolidated formation to the land surface.**

Line 608. Letter b. Again, strike the words, **solid, non-weathered, non-fractured**. Same reason as above

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Line 620 of Letter b. If sealing material never comes to the surface because it goes out through the formations, the department can't prove that there is 10 feet of sealing. If the department can't inspect it, don't require it.

Line 704. Letter f. Centralizers on thermoplastic pipe are a hindrance rather than an asset because the bell ends act as

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